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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/696,803	10/25/2000	Mark E. Epstein	6169-161	3186

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EXAMINER

MCFADDEN, SUSAN IRIS

ART UNIT PAPER NUMBER

2655

DATE MAILED: 07/22/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/696,803

Applicant(s)

EPSTEIN, MARK E.

Examiner

Susan McFadden

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 October 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3,7,9,13,14,17-19,22-29, and 31-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Epstein et al., "Statistical NLU using Hidden clumpings".

In regard to claims 1,2,5,23,24,25,26,32, and 34, Epstein et al. show a system, computer readable medium, and method for a bi-directional natural language system which comprises: applying a statistical natural language understanding (NLU) model to text input by identifying substrings within the text input, examining each substring using an inventory of queries corresponding to the selected NLU model, which can be done repeatedly (20 iterations, pgs. 176-178).

In regard to claims 3,9,14,19,22,28,31,33, and 35, Epstein et al. show the method above which uses a probabilistic scoring method which inherently determines weights for features (pg. 178).

In regard to claims 13,17, and 18, Epstein et al. show a statistical parsing system comprising: applying a statistical natural language understanding (NLU) model to text

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input by identifying substrings or features (inherently containing a text buffer) within the text input, examining each identified substring using an inventory of queries corresponding to the selected NLU model, which can be done repeatedly (pg. 176-178).

In regard to claims 27 and 29, Epstein et al. show a direct channel method comprising: applying a statistical natural language understanding (NLU) model to text input by identifying substrings or features within the text input, examining each identified substrings using an inventory of queries corresponding to the selected NLU model, which can be done repeatedly (pg. 176-178).

3. Claims 1-5,7-10,12-15,17-20, and 22-35 are rejected under 35 U.S.C. 102(e) as being anticipated by Carberry et al. (6,442,522).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

In regard to claims 1,2,5,23,24,25,26,32, and 34, Carberry et al. show a system, computer readable medium, and method for a bi-directional natural language system which comprises: applying a statistical natural language understanding (NLU) model to text input by identifying request elements (claimed strings or features) within the text input (col. 5), examining each identified request elements using an inventory of queries

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corresponding to the selected NLU model (col. 5, ln 10-col. 6), which can be done repeatedly.

In regard to claims 3,9,14,19,22,28,31,33, and 35, Carberry et al. show the method above which uses a probabilistic scoring method (col. 5, ln 20-35) which inherently determines weights for features.

In regard to claims 4,10,15, 20, and 30, Carberry et al. show the method above, wherein a selected statistical NLU mode comprises a maximum entropy direct channel model, a source channel model trained by the expectation maximization algorithm, a statistical parser or a word spotter (col. 5, ln 19-50).

In regard to claims 7 and 8, Carberry et al. show a maximum entropy method comprising: applying a statistical natural language understanding (NLU) model to text input by identifying request elements (claimed strings or features) within the text input (col. 5), examining each identified request elements using an inventory of queries corresponding to the selected NLU model (col. 5, ln 10-col. 6), which can be done repeatedly.

In regard to claims 13,17, and 18, Carberry et al. show a statistical parsing system comprising: applying a statistical natural language understanding (NLU) model to text input by identifying request elements (claimed strings or features, inherently containing a text buffer) within the text input (col. 5), examining each identified request elements using an inventory of queries corresponding to the selected NLU model (col. 5, ln 10-col. 6), which can be done repeatedly.

In regard to claims 27 and 29, Carberry et al. show a direct channel method comprising: applying a statistical natural language understanding (NLU) model to text input by identifying request elements (claimed strings or features) within the text input (col. 5), examining each identified request elements using an inventory of queries corresponding to the selected NLU model (col. 5, In 10-col. 6), which can be done repeatedly.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6,11,16, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carberry et al. (6,442,522).

In regard to claims 6,11,16, and 21, Carberry et al. show the method discussed above. They do not specifically show a parse tree is used. The Examiner takes Official Notice that one of ordinary skill in the art would know that parse trees are commonly used. Therefore, it would be obvious to one of ordinary skill in the art at the time of the invention to add this feature because it provides the system with a more efficient way of analyzing the data.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan McFadden whose telephone number is 703-308-6693. The examiner can normally be reached on Monday-Friday, 9:30-6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 703-305-4827. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Susan McFadden
Primary Examiner
Art Unit 2655

July 19, 2004